

Montana Department of Fish, Wildlife & Parks
1400 South 19th Avenue, Bozeman, MT 59718

Draft Environmental Assessment (8/15/08)

**Leverich Creek Westslope Cutthroat Trout Conservation Project: Removal of
Nonnative Trout and Construction of a Migration Barrier**

PART I. PROPOSED ACTION DESCRIPTION

1. Type of Proposed State Action:

The proposed action is to remove nonnative brook trout (*Salvelinus fontinalis*) from the upper reaches of Leverich Creek using mechanical methods including electrofishing and trapping. The project is intended to secure a native westslope cutthroat trout (WCT) (*Oncorhynchus clarki lewisi*) population in Leverich Creek by eliminating competition from brook trout. In conjunction with removal of brook trout, a barrier to upstream fish migration would be constructed at the lower end of the project reach to prevent additional movement of nonnative trout into the drainage.

2. Agency Authority for the Proposed Action

- Montana Fish, Wildlife & Parks (FWP) is required by law to implement programs that manage sensitive fish species in a manner that assists in the maintenance or recovery of those species, and that prevents the need to list the species under 87-5-107 or the federal Endangered Species Act. Section 87-1-201(9)(a), M.C.A.
- FWP signed the Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout and Yellowstone Cutthroat Trout in Montana (FWP 2007) which states: “The management goals for cutthroat trout in Montana are to: 1) ensure the long-term, self-sustaining persistence of each of the subspecies distributed across their historical ranges, 2) maintain the genetic integrity and diversity of non-introgressed populations, as well as the diversity of life histories represented by remaining cutthroat trout populations, and 3) protect the ecological, recreational, and economic values associated with each subspecies.”

3. Name of Project

Leverich Creek Westslope Cutthroat Trout Conservation Project: Removal of Nonnative Trout and Construction of a Migration Barrier.

4. Project Construction and Completion

Estimated Construction/Commencement Date:

- Nonnative brook trout would be initially removed in the summer and fall of 2008.
- The migration barrier (a culvert road crossing modification) would be constructed in the fall of 2008 or in 2009 after construction funds and appropriate permits are received.

Estimated Completion Date:

- Removal efforts would continue until brook trout are eradicated from the project reach. Similar mechanical removal efforts in like size streams have typically taken 3 – 4 years to complete.

5. Location Affected by Proposed Action (county, range and township)

Leverich Creek, Gallatin County, R5E, T3S

6. Project Size: Number of acres that would be directly affected that are currently:

1. Developed/ residential – 0 acres
2. Industrial – 0 acres
3. Open space – 0 acres
4. Wetland/ riparian – < 1 acre
5. Floodplain – 0 acres
6. Irrigated cropland – 0 acres
7. Dry cropland – 0 acres
8. Forestry – 0 acres
9. Rangeland – 0 acres
10. Other – 1.4 miles of stream

7. Map/site plan: See Figs. 1 and 2.

8. Local, State or Federal agencies with overlapping or additional jurisdiction.

The U.S. Forest Service (FS), Gallatin National Forest manages federal lands adjacent to the proposed project reach on Leverich Creek. Along with FWP, the FS is a cosigner of a Memorandum of Understanding and Conservation Agreement (MOU; FWP 2007) that outlines measures necessary for conservation of WCT in Montana including removal of nonnative trout species to protect specific WCT populations.

(a) Permits:

No permits are necessary for mechanical removal of nonnative trout. Prior to construction of the fish migration barrier, necessary permits will be attained. These may include a FWP Stream Protection Act 124 permit, U.S. Army Corp of Engineers 404 permit, and MT Department of Environmental Quality 318 Authorization. These standard permitting processes will be used to help identify and mitigate potential impacts (channel modifications) of the barrier and its installation.

(b) Funding:

FWP and the Gallatin National Forest are cooperators in implementing and funding this project. Funding would include resources that are currently allocated by FWP and the Gallatin National Forest towards WCT conservation efforts, and may include other resources (e.g., Future Fisheries Grant Program and Trout Unlimited) that would be applied for if additional resources become necessary. Anticipated resource needs are detailed on page 11.

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

<u>Name</u>	<u>Type of Responsibility</u>
US Forest Service, Gallatin National Forest	Management of federal lands within the Leverich Creek drainage
Steve Liebman	Private property owner within the Leverich Creek drainage

9. Summary of the proposed action:

Need for the Proposed Action

The westslope cutthroat trout, Montana's state fish, has declined in abundance, distribution, and genetic diversity throughout its native range (Shepard et al. 2003). Reduced distribution of WCT is particularly evident in the Missouri River drainage of Montana where genetically pure populations are estimated to persist in less than 3% of habitat they historically occupied. Major factors contributing to this decline include competition with nonnative brook, brown (*Salmo trutta*) and rainbow trout (*O. mykiss*) that were first introduced to Montana in the 1890's, hybridization with rainbow and Yellowstone cutthroat trout (*O. c. bouvieri*), habitat changes, and isolation to small headwater streams. Due to these threats, most remaining WCT populations in the Missouri River drainage are considered to have a low likelihood of long-term (100 years) persistence unless conservation actions are implemented (Shepard et al. 1997).

Leverich Creek, a tributary to Bozeman Creek near Bozeman, MT (Figs. 1 and 2), maintains one of the seven known WCT populations in the Gallatin River drainage. In total, these seven WCT populations occupy about 46 miles of habitat, less than 5% of their historic range in the Gallatin River drainage. Only one of these populations, Wildhorse Creek, is considered genetically "pure", that is, not hybridized with nonnative trout. Although the Leverich Creek WCT population is very slightly hybridized (<1%) with nonnative rainbow trout, its ecological significance is important due to the few remaining WCT populations in the Gallatin River drainage. Local biologists (FWP and FS) have identified Leverich Creek WCT as a "Conservation Population" which indicates management efforts should emphasize protection and recovery of the population. The Gallatin National Forest is implementing land management activities in the Leverich Creek drainage which are consistent with WCT conservation (see attachment 1).

Very few WCT remain in Leverich Creek. Surveys in 2006 and 2007 indicate the WCT population comprises fewer than 250 fish (age 1 and older) and only occupies about 1.4 miles of stream. Nonnative brook trout are also present throughout this stream reach and outnumber WCT in the lower 0.8 miles. Brook trout displacement of WCT is common where the species range overlap and is recognized as an important reason for the loss of many WCT populations. This displacement has been attributed to a size and competitive advantage of young brook trout due to timing of reproduction (Shepard and Nelson 2004). Without efforts to control brook trout, it is probable that over time they will completely displace WCT from Leverich Creek, although the timeframe for this is unknown. Similarly concerning, the low numbers of WCT currently observed in Leverich Creek suggests this population is susceptible to the affects of inbreeding, and its reduced distribution indicates that it is vulnerable to extreme habitat conditions like fire and drought.

Preservation of remaining WCT populations, like in Leverich Creek, is the primary strategy for conservation of WCT in Montana (MOU 2007). Few WCT populations are considered "protected" in the Gallatin River drainage, and efforts to protect populations, like in Leverich Creek, are necessary to ensure

continued persistence of the species in the basin. These rare local populations maintain the remaining genetic diversity of the species, and each may perpetuate adaptive traits that are important to the species as a whole (Leary et al. 1998). For these reasons, their disappearance would be a significant loss for WCT conservation efforts.

Summary of Proposed Action

The proposed action is to remove, and hopefully eradicate, nonnative brook trout from the headwaters of the Leverich Creek (Figs. 1 and 2) using mechanical collection methods, including electrofishing and trapping. This effort is expected to benefit the native WCT population by reducing competition from brook trout. Brook trout would be removed from about 1.4 stream miles. A barrier to upstream fish migration would be placed at the lower end of the project area to prevent additional movement of nonnative trout into the drainage.

Electrofishing would be the primary method to capture and remove brook trout from the project area. Electrofishing is a common fish collection technique where battery or generator produced electricity is applied to a stream to stun and collect fish. Electrofishing has been used in several WCT conservation efforts in Montana to eradicate brook trout from streams similar in size to Leverich Creek (Shepard and Nelson 2004). Specifically, brook trout removal efforts would include one to three, 3-man crews using backpack electrofishing equipment to capture fish. The entire project reach would be electrofished over a 3- or 4-day period, and 1 to 4 periods per year depending on the number of brook trout captured. Removal efforts would typically occur during late summer or fall after WCT have spawned and fry have emerged. Brook trout may also be captured by placing small, funnel-shaped traps in the stream during September and October when they are spawning. All captured WCT would be returned to the stream.

Because Leverich Creek is relatively small, typically 5 – 7 ft. in width, removals efforts are expected to be highly efficient, and brook trout abundance should be significantly reduced (> 90%) within 1 or 2 years. Removal efforts would continue until brook trout are eradicated from the project reach, likely within 3 to 4 years. Captured brook trout will be euthanized and disposed of on-site. The relocation of collected brook trout to other areas within the Leverich Creek drainage, or other streams, would be harmful to fish populations already persisting in those areas by increasing competition for limited habitat. Transfer of brook trout to other streams would also include the potential of introducing pathogens into those waters. A vast majority (> 90%) of brook trout in Leverich Creek are less than 5 inches in length.

A barrier to upstream moving fish would also be constructed at the lower end of the project reach (Figs. 1 and 2) to prevent recolonization by non-native trout. The barrier will be created by replacing an existing culvert at a country road crossing (Picture 1) with a single “perched” culvert (example Picture 2). The barrier culvert will create a vertical drop sufficient to prevent fish from entering and migrating through the structure. Prior to construction of the fish migration barrier, necessary permits will be attained. These may include a FWP Stream Protection Act 124 permit, U.S. Army Corp of Engineers 404 permit, and MT Department of Environmental Quality 318 Authorization. These standard permitting processes will be used to help identify and mitigate potential impacts (channel modifications) of the barrier and its installation.

Benefits of the Proposed Project

The primary purpose of this project is to help achieve the goal of ensuring the long-term, self-sustaining

presence of WCT in the upper Missouri River drainage by protecting one of the few remaining WCT populations in the Gallatin River drainage. With successful removal of nonnative brook trout, the benefits of the proposed effort would include:

- Securing a rare, upper Missouri River WCT population.
- Fulfilling the State's obligation to protect all identified WCT conservation populations (FWP 2007).
- Reducing threats that may encourage requests for listing WCT under the Endangered Species Act.

10. Agencies consulted during preparation of the EA:

- Montana Fish, Wildlife & Parks, Bozeman, Helena and Townsend
- Gallatin National Forest, Bozeman

PART II. ENVIRONMENTAL REVIEW

1. Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

1. <u>LAND RESOURCES</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated*	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Soil instability or changes in geologic substructure?			x		Yes	1a.
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?		X				
c. **Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			X		Yes	1d.
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				
f. Other: N/A						

Comment 1a. Construction of the migration barrier would cause some disturbance of the stream bank and channel, although this will be minor due to the fact the barrier will be constructed at an existing road crossing. Appropriate barrier designs and installation techniques would be developed and reviewed through state and federal permitting processes (as necessary) to minimize and mitigate these impacts.

Minor pruning of brush along and over the stream channel, and removal of some overhanging logs would occur to permit better access to the stream and increase electrofishing efficiency. No vegetation will be killed, and logs that are clearly associated with channel stability (i.e., keyed into stream bed or bank) will not be removed.

Comment 1d. Installation of the barrier (perched culvert) will cause some minor modification of the stream channel immediately adjacent to the barrier site, although this will be minor due to the fact that the site has existing road culverts. An appropriate barrier design (based on site and drainage characteristics) and installation techniques will be implemented to minimize stream channel alteration. Potential barrier designs and construction techniques will be reviewed through appropriate permitting processes.

2. <u>AIR</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated*	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Emission of air pollutants or deterioration of ambient air quality? (also see 13 (c))		X				
b. Creation of objectionable odors?		X				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. ***For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regs? (Also see 2a)		X				
f. Other: N/A						

3. WATER Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated*	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. *Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X		Yes	3a.
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of floodwater or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?		X				
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
l. ****For P-R/D-J, will the project affect a designated floodplain? (Also see 3c)			X		Yes	3l.
m. ***For P-R/D-J, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a)		X				
n. Other: N/A						

Comment 3a. Some increases in turbidity may occur over a short period of time during barrier construction. Turbidity will be mitigated through the Department of Environmental Quality 318 Authorization review process that will identify barrier installation practices that minimize turbidity.

Comment 3l. Installation of the barrier (perched culvert) will cause some minor modification of the stream channel immediately adjacent to the barrier site, although this will be minor due to the fact that the site has existing road culverts. An appropriate barrier design (based on site and drainage characteristics) and installation techniques will be implemented to minimize stream channel alteration. Potential barrier designs and construction techniques will be reviewed through appropriate permitting processes.

4. <u>VEGETATION</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?		X				4a.
b. Alteration of a plant community?		X				
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?		X				
f. ****For P-R/D-J, will the project affect wetlands, or prime and unique farmland?		X				
g. Other: N/A						

Comment 4a. Minor pruning of brush along and over the stream channel, and removal of some overhanging logs would occur to permit better access to the stream and increase electrofishing efficiency. No vegetation will be killed, and logs that are clearly associated with channel stability (i.e., keyed into stream bed or bank) will not be removed.

** 5. FISH/WILDLIFE Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Unknown *
		None	Minor *	Potentially Significant		
a. Deterioration of critical fish or wildlife habitat?			X		No	5a
b. Changes in the diversity or abundance of game animals or bird species?			X		No	5b
c. Changes in the diversity or abundance of nongame species?		X				
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?			X		No	5e.
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		X				
h. ****For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f)		X				
i. ***For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d)		X				
j. Other: N/A						

Comment 5a. Removal of some over-hanging logs and pruning of woody vegetation is proposed to increase electrofishing efficiency for removal of nonnative trout. This is anticipated to be a minor and short-term impact to remaining fish for several reasons: vegetation will rapidly re-grow, logs associated with the channel will not be removed, and the stream will remain shaded from conifer trees not impacted by woody vegetation pruning.

Comment 5b. The proposed action is expected to result in an increase in native WCT abundance and a decrease in nonnative brook trout abundance in upper Leverich Creek. This is considered a minor impact because the current brook trout fishery in Leverich Creek is minimal (based on angler use data), and brook trout will continue to be abundant in numerous other streams in the Gallatin River basin. The project is intended to increase the abundance and range of WCT, a rare and unique resource with limited distribution in the Missouri River drainage. Westslope cutthroat trout are currently protected by catch-and-release regulations in most streams in the central fish district including Leverich Creek. Restoration efforts like the proposed action are intended to increase overall WCT abundance which may result in greater fishing opportunities and harvest for this rare native species.

Comment 5e. The proposed action will create a barrier to prevent upstream migration of fish into the headwater reaches of Leverich Creek which is the intended consequence of the structure (e.g., to prevent competition and or hybridization). The barrier is specifically targeted at preventing upstream movement of nonnative trout, but the barrier would impede all fish species. However, other than WCT, no additional native fish are currently known to occupy Leverich Creek. Because no additional WCT populations are known to exist adjacent to Leverich Creek, it is unlikely that gene-flow or demographic support between WCT populations will be prevented by the barrier. The barrier should not impede other animals (e.g., amphibians) to a significantly greater extent than the existing culvert structure.

B. HUMAN ENVIRONMENT

6. <u>NOISE/ELECTRICAL EFFECTS</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Increases in existing noise levels?		X				
b. Exposure of people to serve or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other: N/A						

7. <u>LAND USE</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				
e. Other: N/A						

8. <u>RISK/HEALTH HAZARDS</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				
b. Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?		X				
d. ***For P-R/D-J, will any chemical toxicants be used? (Also see 8a)		X				
e. Other: N/A						

9. <u>COMMUNITY IMPACT</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				
f. Other: N/A						

10. <u>PUBLIC SERVICES/TAXES/UTILITIES</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:			X		No	10a
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased used of any energy source?		X				
e. **Define projected revenue sources			X		No	10e
f. **Define projected maintenance costs.			X		No	10e
g. Other:						

Comment 10a. Government agency review of permits (FWP Stream Protection Act, U.S. Army Corp of Engineers 404, and MT Department of Environmental Quality 318 Authorization) will be required for installation of the migration barrier.

Comment 10e, f. This project would be part of the larger WCT conservation program in FWP Region 3 and would be primarily implemented by FWP staff dedicated to such efforts. The FWP Region 3 WCT conservation program is funded through FWP, federal (U.S. Forest Service and U.S. Bureau of Land Management), and private (Montana Trout Unlimited) dollars. As part of the Gallatin National Forest fisheries program, personnel from the Forest would have a significant role in barrier design and installation and would participate in some aspects of the brook trout removal efforts. Montana Trout Unlimited volunteers may also assist in the brook trout removal efforts. Expected labor demands for the removal efforts would be 25–50 man-days per year

until brook trout are eradicated from the project reach, which is anticipated in 3–4 years. Existing operation resources and additional grants (e.g., Future Fisheries Improvement program) would be used to fund construction of the barrier.

** 11. <u>AESTHETICS/RECREATION</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?			X		No	11a.
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. **Alteration of the quality or quantity of recreational/tourism opportunities and settings?			X		Yes	11c.
d. ***For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c)		X				
e. Other: N/A						

Comment 11a. A barrier structure would be placed in Leverich Creek to prevent migration of nonnative trout into the project reach. See example: Photo 2. The constructed barrier would look similar to the existing culvert crossing (Photo 1).

Comment 11c. Angling and harvest opportunities for nonnative brook trout would be reduced in upper Leverich Creek. However, because the stream is very small it currently supports minimal fishing pressure. Additional nonnative trout fisheries are abundant in the Gallatin River drainage. Anglers will still be permitted to fish for WCT in Leverich Creek but are currently required to release captured WCT. Restoration efforts like the proposed action are intended to increase overall WCT abundance which may result in greater fishing opportunities and harvest for this rare native species.

12. <u>CULTURAL/HISTORICAL RESOURCES</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		X				
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. ****For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a)		X				
e. Other: N/A						

SIGNIFICANCE CRITERIA

13. <u>SUMMARY EVALUATION OF SIGNIFICANCE</u> Will the proposed action, considered as a whole:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. ***For P-R/D-J, is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e)		X				
g. ****For P-R/D-J, list any federal or state permits required.		X				13g.

Comment 13g. FWP Stream Protection Act 124, U.S. Army Corp of Engineers 404, and MT Department of Environmental Quality 318 Authorization may be required for installation of the migration barrier, and will be prepared as necessary.

PART II. ENVIRONMENTAL REVIEW, CONTINUED

2. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

Two alternatives were considered during the preparation of this EA

1) No Action

The predicted consequences of the “No Action” alternative are:

- Competition from nonnative brook trout would not be decreased in the upper reach of Leverich Creek, and the possibility of a rare, Gallatin River basin WCT population ultimately becoming extirpated due to this threat would remain high.

- No costs associated with brook trout removal efforts and barrier construction, neither of which would be undertaken.

- 2) **Preferred Alternative:** Removal of nonnative brook trout from the proposed project reach using mechanical methods and the placement of a migratory barrier to prevent their reinvasion (proposed action).

The predicted consequences of the Preferred Alternative were detailed and discussed in Part I and Part II.

3. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

None

PART III. NARRATIVE EVALUATION AND COMMENT

Addressed in Part I and Part II

PART IV. EA CONCLUSION SECTION

1. Based on the significance criteria evaluated in this EA, is an EIS required (YES/NO)? If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.

No. An EIS is not required under the Montana Environmental Policy Act (MEPA) because the project lacks significant impacts to the physical or human environment. Therefore, the impacts are appropriately addressed through an Environmental Assessment. The primary impact associated with the project is reduced abundance and distribution of nonnative trout in the headwaters of Leverich Creek which is the intended consequence of the action.

2. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

The public will be notified through local newspapers and through contact with local landowners, sporting and recreational groups, and others who have previously indicated interest in similar projects. This EA will also be published on the Montana Fish, Wildlife & Parks web page (<http://fwp.mt.gov/default.html>). Public comments can be given at the FWP web page, or in writing to: Lee Nelson, Montana Fish, Wildlife & Parks, 415 South Front Street, Townsend, MT 59644, or email: leenelson@mt.gov. Comments on the EA will be accepted until 5:00 pm, September 15, 2008. Please include name and address with any comment. This level of public involvement is believed adequate for the proposed project as similar and recent efforts in the Dillon Area and the Elkhorn Mountains near Helena have

produced no significant issues or controversy. If significant concerns are raised concerning this EA, a public open house to discuss the issues will be scheduled.

3. Duration of comment period

The public comment period for this proposal is from August 15, 2008, to September 15, 2008. Written comment can be mailed to:

Lee Nelson
Montana Fish, Wildlife & Parks
415 South Front Street
Townsend, MT 59644
E-mail: leenelson@mt.gov

4. Name, title, address and phone number of the person(s) responsible for preparing the EA:

Lee Nelson
Fisheries Biologist
Montana Fish, Wildlife & Parks
415 South Front Street
Townsend, MT 59644
Phone: 406-495-3866
E-mail: leenelson@mt.gov

References

- FWP. 2007. Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout and Yellowstone Cutthroat Trout in Montana. Montana Fish, Wildlife and Parks, Helena, Montana.
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Figure 1. Map of proposed WCT project area (1.4 miles) on Leverich Creek, near Bozeman, MT.

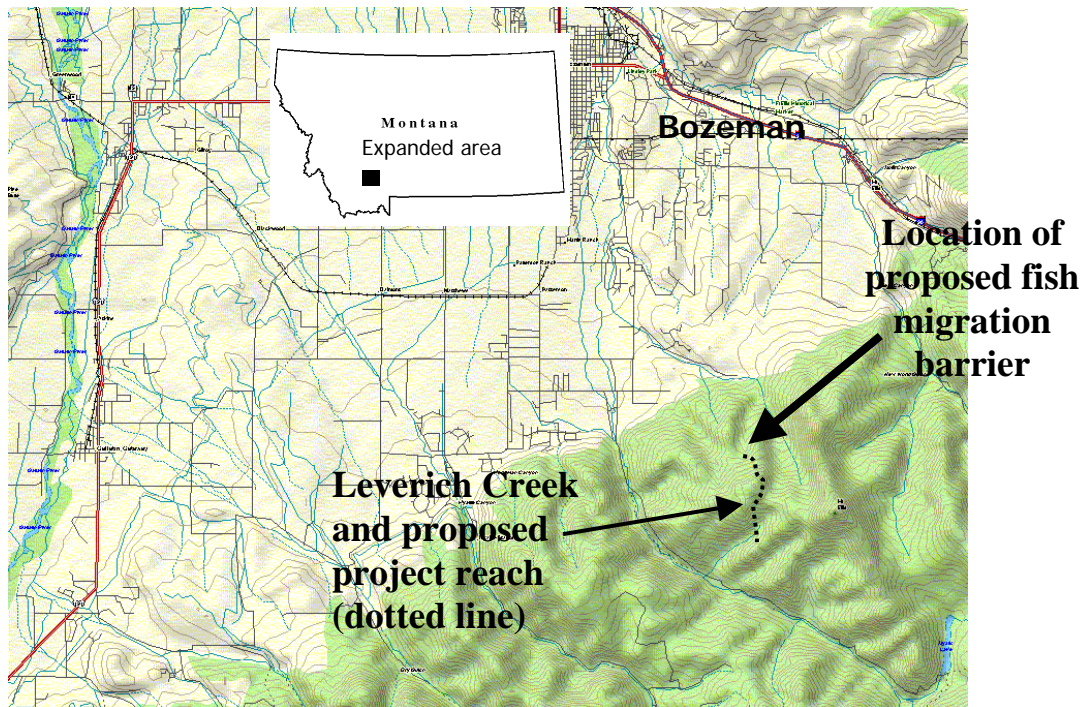
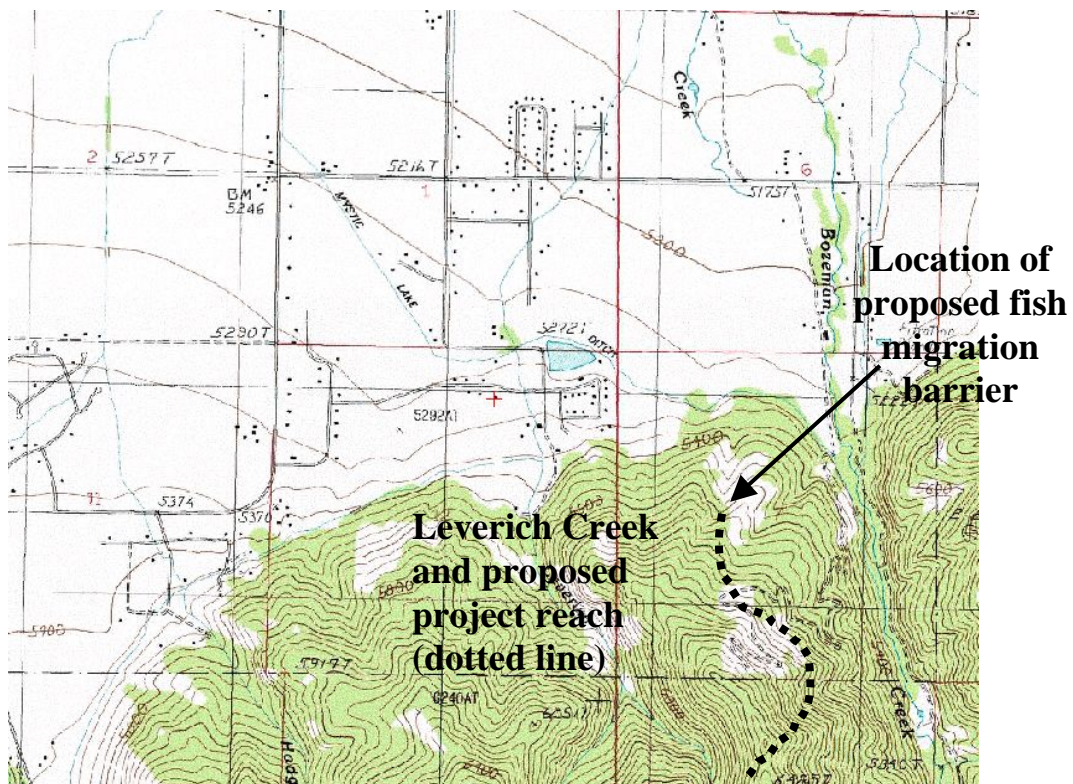


Figure 1. Detailed map of proposed WCT project area (1.4 miles) on Leverich Creek, near Bozeman, MT.



Picture 1. Current culvert crossing on Leverich Creek, and the proposed site to a place perched culvert that prevents upstream migration of nonnative trout.



Picture 2. Example of a perched culvert that prevents upstream migration of nonnative trout.





United States
Department of
Agriculture

Forest
Service

Gallatin National Forest

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File Code: 2670

Date: July 30, 2008

Pat Flowers
Regional Supervisor
Montana Fish Wildlife & parks
1400 S. 19th Avenue
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This letter is my official support of the Leverich Creek Westslope Cutthroat Trout Conservation Project which includes the removal of nonnative trout and construction of a migration barrier. The Bozeman Ranger District is willing to assist Montana Fish, Wildlife and Parks with this project.

In conjunction with this proposal, the Bozeman Ranger District is considering several projects within the drainage which could benefit the project your agency is presently proposing. We are planning to re-route a small portion of Forest Service trail # 435, to eliminate this potential source of sediment. The old logging road up the right fork of Leverich Creek is proposed for decommissioning in the next couple of years. A SPA-124 permit will be acquired to stabilize one stream crossing near the existing trailhead.

This population of westslope cutthroat trout was found during the field review portion of the proposed Bozeman Municipal Watershed (BMW) fuels reduction project. To prevent impacts to this new found population, the project has been modified in the Leverich Creek drainage. In the new preferred alternative, some ground based fuels treatment units would either be dropped or modified using helicopters to remove the timber. All access roads would be temporary and closed upon completion of the project. Two-tenths of a mile linear segment would be maintained as a shaded fuel break along a ridge line. The proposed helicopter landing at the Leverich Creek trailhead has been moved to a high ridge line no longer requiring log trucks to haul along the Leverich Canyon Road.

One other project to coordinate is the spot surfacing and stabilization of the Leverich Canyon Road below the Forest boundary. The maintenance responsibility of this road belongs to Gallatin County as decreed in an old court decision. In the past, The Gallatin National Forest has maintained portions of this narrow road.

The BMW project could potentially be designed as a Stewardship project. Meaning contractors can exchange services in lieu of money to cover the cost the wood removed. If the project is approved, spot surfacing and stabilization of the Leverich Canyon road is an improvement project being considered as part of a Stewardship Contract.



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I believe the Bozeman Ranger District is managing Leverich Creek drainage to meet the intent of the multi-agency agreement to save & restore native cutthroat trout. We will continue to work with our partners and protect this important fisheries habitat investment.

If you have any further questions or comments, please contact Bruce Roberts, zone fisheries biologist, at (406) 522-2544.



JOSE CASTRO
District Ranger

cc: Forest Supervisor

cc: Lee Nelson